

# ULTRA PRECISION CHIP RESISTORS

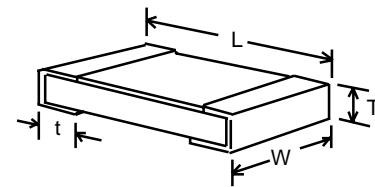
## BLU SERIES



RESISTORS • CAPACITORS • COILS • DELAY LINES



Type BLU1206A



- Industry's widest range of precision chip resistors!
- Tolerance to  $\pm 0.01\%$ , TCR to 5 ppm/ $^{\circ}\text{C}$
- Wattage rating up to 1W
- Non-standard values available on custom basis

### CUSTOM OPTIONS

- Option P: Pulse resistant design
- Option M: Matched sets
- Option ER: Burn-In for Hi-Rel applications
- Option W: Lead-free terminations
- Option A: Marking of resis. code (3 or 4 digits). Opt. A isn't available on BLU0201 or BLU0402.

### RCD's BLU-CHIP resistors feature top performance at an economical price!

RCD's expertise in the field of ultra-precision resistors since 1973, combined with the latest in automated chip resistor production equipment, enables precision chip resistors at prices comparable to lower grade devices. The BLU-chip design features excellent stability levels, low noise and voltage coefficient, as well as low inductance and capacitance. Numerous values available from stock. Consult factory for availability of non-standard values.

RCD Type	Power @ 70°C	Max. Working Voltage*	Max. Overload Voltage <sup>1</sup>	TCR (PPM/ $^{\circ}\text{C}$ )	Standard Resistance Range <sup>1</sup>			Dimensions			
					.01%-.05%	.1%-0.25%	0.5%-1%	L	W	T	t
BLU0201	.05W	15V	30V	25,50	N/A	N/A	33 $\Omega$ - 22K	.020 $\pm$ .004	.01 $\pm$ .002	.014 $\pm$ .004	01 $\pm$ .005
				100	N/A	100 $\Omega$ - 10K	10 $\Omega$ - 22K	[.5 $\pm$ .1]	[.25 $\pm$ .05]	[.35 $\pm$ .1]	[.25 $\pm$ .12]
BLU0402	.062W	25V	50V	10	10 $\Omega$ - 3K	10 $\Omega$ - 10K	10 $\Omega$ - 10K	.040 $\pm$ .004	.020 $\pm$ .002	.014 $\pm$ .004	.01 $\pm$ .005
				25,50,100	10 $\Omega$ - 3K	10 $\Omega$ - 100K	10 $\Omega$ - 1M	[1.0 $\pm$ .1]	[.5 $\pm$ .05]	[.35 $\pm$ .1]	[.25 $\pm$ .12]
BLU0603	.1W	75V	150V	10	10 $\Omega$ - 15K	10 $\Omega$ - 51K	10 $\Omega$ - 51K	.063 $\pm$ .008	.031 $\pm$ .006	.018 $\pm$ .006	.012 $\pm$ .008
				25,50,100	10 $\Omega$ - 15K	10 $\Omega$ - 332K	10 $\Omega$ - 360K	[1.6 $\pm$ .2]	[.8 $\pm$ .15]	[.45 $\pm$ .15]	[.3 $\pm$ .2]
BLU0805	.125W	100V	200V	5, 10	10 $\Omega$ - 24K	10 $\Omega$ - 100K	10 $\Omega$ - 100K	.079 $\pm$ .006	.050 $\pm$ .006	.018 $\pm$ .006	.014 $\pm$ .008
				25,50,100	10 $\Omega$ - 24K	10 $\Omega$ - 1M	4.7 $\Omega$ - 1M	[2.0 $\pm$ .15]	[1.25 $\pm$ .15]	[.45 $\pm$ .15]	[.30 $\pm$ .2]
BLU1206	.25W	100V	200V	5, 10	10 $\Omega$ - 33K	10 $\Omega$ - 200K	10 $\Omega$ - 200K	.126 $\pm$ .006	.063 $\pm$ .006	.020 $\pm$ .006	.020 $\pm$ .010
				25,50,100	10 $\Omega$ - 33K	10 $\Omega$ - 2M	4.7 $\Omega$ - 4.7M	[3.2 $\pm$ .15]	[1.6 $\pm$ .15]	[.50 $\pm$ .15]	[.51 $\pm$ .25]
BLU1210	.33W	100V	200V	5, 10	100 $\Omega$ - 10K	100 $\Omega$ - 330K	100 $\Omega$ - 330K	.126 $\pm$ .006	.098 $\pm$ .008	.024 $\pm$ .008	.020 $\pm$ .010
				25,50,100	100 $\Omega$ - 10K	10 $\Omega$ - 2M	10 $\Omega$ - 4.7M	[3.2 $\pm$ .15]	[2.5 $\pm$ .2]	[.61 $\pm$ .2]	[.51 $\pm$ .25]
BLU2010	.5W	150V	300V	10	10 $\Omega$ - 33K	10 $\Omega$ - 33K	10 $\Omega$ - 33K	.197 $\pm$ .008	.098 $\pm$ .008	.024 $\pm$ .008	.024 $\pm$ .008
				25,50,100	10 $\Omega$ - 33K	10 $\Omega$ - 2M	10 $\Omega$ - 4.7M	[5 $\pm$ .2]	[2.5 $\pm$ .2]	[.61 $\pm$ .2]	[.61 $\pm$ .2]
BLU2512	1.0W	200V	400V	10	10 $\Omega$ - 36K	10 $\Omega$ - 36K	10 $\Omega$ - 36K	.248 $\pm$ .008	.126 $\pm$ .008	.024 $\pm$ .008	.024 $\pm$ .008
				25,50,100	10 $\Omega$ - 36K	10 $\Omega$ - 2M	10 $\Omega$ - 4.7M	[6.3 $\pm$ .2]	[3.2 $\pm$ .2]	[.61 $\pm$ .2]	[.61 $\pm$ .2]

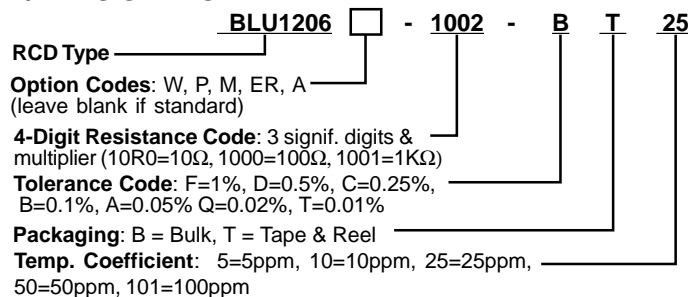
\*Maximum working voltage determined by  $E = \sqrt{PR}$ , E should not exceed value listed. Increased voltage ratings available.  
<sup>1</sup> Extended range available, consult factory.

### TYPICAL PERFORMANCE CHARACTERISTICS

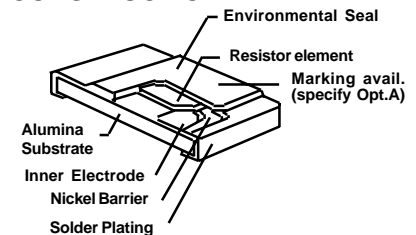
Requirements	Characteristics (5-25ppm)*	Test Method
Short Time Over Load	$\pm 0.1\%$	Rated W x 2.5, 5 seconds at 25°C (not to exceed Max Overload Voltage)
Resistance to Soldering Heat	$\pm 0.05\%$	260 $\pm$ 5°C, 3 seconds
High Temperature Exposure	$\pm 0.1\%$	100 hours @ +125°C
Thermal Shock	$\pm 0.1\%$	-55°C to +125°C, 0.5 hours, 5 cycles
Moisture Resistance	$\pm 0.2\%$	Mil-STD-202 M.103 95% RH 1000 hrs
Load Life (1000 hours)	$\pm 0.1\%$	Rated W per Mil-PRF-55342 4.8.11.1
Extended Life (10,000 hrs)	$\pm 0.25\%$	Rated W per Mil-PRF-55342 4.8.11.1
Solderability	95% (Min.)	MIL-Std-202, Method 208
Shelf Life	100 ppm/year (Max.)	Room Temp. & Humidity, No-Load
Dielectric Withstanding Voltage	250V (100V 0402 & 0603)	60 Seconds, terminal to ceramic

\*The typical  $\Delta R$  level of chips with 50- 100ppm TCR is double that of chips with 5 to 25ppm

### P/N DESIGNATION:

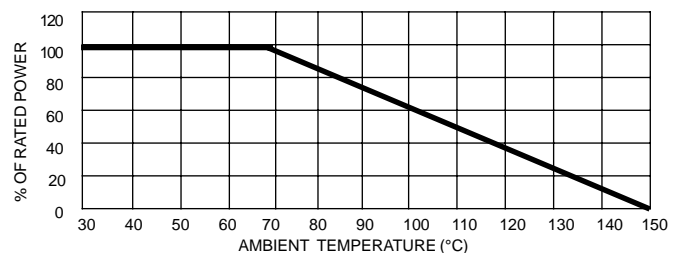


### CONSTRUCTION



### DERATING CURVE

Resistors may be operated up to full rated power with consideration of mounting density, pad geometry, PCB material, and ambient temperature.



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